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Case Report

Management of Lichen Planus of Nails Through Ayurveda: A Case Report

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Abstract: Nail is a vital skin appendage made up of keratinized matrix ,capable of growing continuously and is also an indicator of the general health of an individual. It consists of a nail plate, matrix and nail bed, eponychium, paronychium, and hyponychium. Below the nail bed lie nerves and vessels, and the matrix produces cells that make the nail plate. Lichen planus is a chronic disorder affecting skin, nails, and mucosae. It can occur independently or can also affect the mucous membrane or skin. There are several treatment modalities for lichen planus of skin, but very few for the one involving nails. When the nails are affected, it can lead to psychosocial and functional consequences, and even mild cases, if not treated on time, can cause permanent destruction. In *Ayurveda*, this condition can be correlated with "*Kunakha*". A 42-year-old male patient had been suffering from brittle, yellowish brown nails of fingers and toes for one and half years. Many modalities in allopathy, such as triamcinolone injections, oral retinoids, and immune suppressants, possess severe long-term side effects. Despite opting for these modalities, he could not get satisfactory results. The study aimed to assess the role of *external ayurvedic* therapies and internal medicines in nail lichen planus. These modalities exhibited excellent results within 45 days of treatment. Though the correlation was done with *Kunakha,* the treatment was planned according to the vitiated *doshas* and *dhatu* involvement. This protocol was effective in nail lichen planus, but a further clinical trial is necessary to find its role in other forms of lichen planus.

Keywords: Lichen planus, nails, *kunakha*, Ayurvedic treatment

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1. INTRODUCTION

Nail Lichen Planus is a disorder that affects nails with or without the involvement of skin and mucosae. The symptoms of nail lichen planus include spell check erythematous patches, subungual hyperkeratosis, longitudinal ridging, distal nail plate splitting, Onycholysis, Onychorrhexis, Melanonychia, and Pterygium. According to reports, there are between 10% and 15% cases of nail lichen planus.[1] Adults of the fifth and sixth decades are more likely to develop nail lichen planus than children, and it mostly affects fingernails as opposed to toenails.[2] With numerous potential initial triggers, T-cell-mediated autoimmunity plays a significant part. Innumerable causes, such as immunological dysregulation, infection, and genetic predisposition, may bring on the condition. Whether the pathogenic site is in the nail matrix or the nail bed determines the variety of nail abnormalities in nail lichen planus. A typical and permanent finding in nail lichen planus is a dorsal pterygium. Permanent deformity brought on by the illness may result in adverse functional and psychological effects. Early diagnosis and immediate treatment are crucial to stop the growth of pterygium. The diagnosis is frequently made by clinical examination alone, but histopathologic evidence of a band-like lymphocytic infiltrate of the nail matrix or bed epithelium is conclusive. Nail Lichen Planus has a highly variable prognosis, which has been reported to be largely negative in eighty percent of patients.[3] Corticosteroids (topical, intralesional, or systemic) are the first-line treatment for nail lichen planus; however, disease continuation or recurrence may need corticosteroid-sparing immune suppressants. In *Ayurveda*, this condition can be correlated to "*Kunakaha*". *Kunakha* (discoloration of the nail) is one of the most common symptoms of nail disease.[1] Kunakha has been described in *Sushruta Samhita, AstangSamgraha* and *Hridaya, Bhavaprakash,* and *SharangadharaSamhita* as *Kshudraroga* (minor diseases). It is derived from two words, "*Ku*" (bad), and "*Nakha*" which means nail. *Kunakha* has been described as a *Pitta*-dominant *Tridoshaja* condition by *acharyas*. Vitiated *Vata* and *PittaDosha* become localized in the area surrounding nails. *Nidana* and *Lakshana* of *KshudraRogas*, including *Chippa* and *Kunakha* have been described by *Acharya Susruta* in *Nidana Sthana* 13th chapter. Due to nail injury, there is *Vata* and *PittaPrakopa*, and the nail becomes *Asita* (black), *Khara*, and *Ruksha*, known as *Kunakha* or *Kulina*.

1.1 Need of Study

Lichen planus is a complex disorder involving the skin, mucous membranes, and nails. Many studies have been conducted on lichen planus of skin, but there are very few reports on nail lichen planus. Moreover, modern management involves the use of steroids, which could lead to decreased immunity by altering cytokine production and reducing phagocytosis and antigen presentation by macrophages, weight gain, and hypertension due to increased renal excretion of phosphate, potassium, and gastric irritation due to parietal cell hyperplasia and gastrin hypersecretion. Mention the possible concerns and give scientific evidence. Moreover, few treatment options are available for managing nail lichen planus. Hence, this case report depicts the efficacy of ayurvedic therapies, which showed excellent results without side effects.

2. CASE REPORT

A 42-year-old male patient complained of reframing the sentence appropriately, cracking and pitting of nails of fingers which gradually involved his toes. Finally, the nails of patient started turning dry, brittle, and yellow. His occupation involved masonry. Earlier, the patient was prescribed corticosteroids and retinoids by a dermatologist. The patient then approached our hospital for *Ayurvedic* medicine. The patient's history was insignificant, and they did not suffer from diabetes mellitus or hypertension.

Case Timeline –Table 1: Describing the significant events and treatment sought for it

Year	Relevant medical history and intervention	
May 2020	Injury at the right thumb during work, the wound was cleaned, and the dressing was done.	
Oct 2020	Noticed cracking and pitting of some nails of my hands, applied coconut oil on them	
Jan 2021	Nails became dry, brittle, and yellow it also included the toenails	
July 2021	The patient got concerned and approached a dermatologist, where he has prescribed corticosteroids and retinoids. Do not mention allopathic treatment; instead, mention treatment history.	
Dec 2021	He did not find any relief	
Mar 2022	The patient approached for ayurvedic treatment	
Day of visit	**Summary of disease condition**	**Intervention**
March 2022 (Day 0)	The patient came with complaints of severe cracking, pitting, brittle and yellow nails of hands and toes (figure 1)	All routine investigations were performed. In addition, the patient was advised to wear gloves further while working. The treatment protocol, as per Tables 1 and 2, was followed.
April 2022 (Day 15)	Mild reduction in cracking and pitting of nails(figure 2)	Tables 1 and 2
May 2022 (Day 45)	Reduction in brittleness and hyperkeratosis, but melanonychia persisted (figure 3)	Tables 3 and 4

2.1 Medical History

After investigating his blood glucose levels, the patient was treated with oral retinoids and corticosteroids. Family History – Not significant.

2.2 Clinical Findings

On examination, onychodystrophy of multiple nails of fingers and toes was brittle with many pits and cracks (onycholysis). It was associated with complete distal nail plate splitting,

severe subungual hyperkeratosis, and melanonychia. (figure 1) categorize the severity of symptoms. Although the patient did not notice proper growth of nails for a year, it did not have mucocutaneous involvement.

2.3 Pathological investigations

The patient's routine examinations were within normal range. In addition, the patient's sample was unreactive and negative for HIV and HbsAg.

2.4 Diagnosis

Since the characteristic signs and symptoms of nail lichen planus were present during the examination, thus further investigations, such as skin biopsy, were not performed for confirmation as the patient could not afford it.

2.5 Therapeutic Intervention

Following external and internal *Ayurvedic* therapies were prescribed for forty-five days. (Table2,3,4,5)

Table 2:List of internal medicines for first 15 days (25/3/22 - 8/4/22)

Medicine	Dose	Anupama
Kaishor Guggulu(Tablet)	(250mg) 2 tabs. thrice daily after meals	Warm water
Gandhak Rasayan(Tablet)	(250mg) 2 tab. thrice daily after meals	Warm water
Sukshma Triphala(Tablet)	(125mg) 2 tabs. twice daily after meals	Warm water
Gandharv Haritaki churna (Powder)	5gm at night	Warm water
Mahamanjisthadi Kwath(Decoction)	20ml twice daily after meals	Warm water

The drugs chosen were, according to vitiated doshas and dhatus, involved in the samprapti of the disease.

Table 3: List of external therapies for first 15 days (25/3/22 - 8/4/22)

Sr No.	*Name of procedure*
1.	*Bhavana* (local cleaning)-With *Neem(A. indica)+guduch i(Tinosporacordifolia)+triphala (Amalaki,haritaki, vibhitaki (Emblica Officinalis, Terminalia chebula, Terminalia bellerica)) kwath* followed by *Lepa with Wound care* ointment *(Panchvalkal and Yashtimadh u(Glycyrrhiza glabra))* - local application
2.	Poorvakarma – sarvaang Full body massage with *dashmooltaila , Sarvaang* Naadi *swedan* with *dashmoolkwath* Pradhan karma – *Basti (Kala Basti)* was administered for 14 days, and the *Lakshana* and *bastipratyagaman*, along with any *vyapads*, were noted. *Niruhabasti*- (500ml) Makshika - 10 gm Saindhav – 5 gmTilaTaila– 50 ml Shatpushpa kalka - 20 gm *Triphala+Guduchi + Neemkwatha*- 150ml *DashmoolKwath*- 300ml TilaTaila– 50 ml Makshika - 10 gm *Saindhav* – 5 gm *Matrabasti*(60 ml) *tiltaila* (30ml) +*karanjtail*(20 ml) + *neem tail* (10 ml) (1A, 2N, 1A, 2N, 1A, 2N, 1A, 2N, 2A) A= anuvasan, N= niruha The entire procedure was completed in stipulated time and no *vyapads* were noted during this period. Paschaat karma – The patient was advised to take a light- homemade diet and avoid *viruddhaahaar,* spicy, baked, and fried foods.

**** External therapies that helped normalize vitiated vata were chosen along with Kashayarasa dravyas for twak prasadan.***

Table 4: Internal medicines for the next 30 days (9/4/22 -8/5/22)

Medicine	Dose	Anupama
Panchtiktaghrita Guggulu(Tablet)	(250mg) 2 tabs. thrice daily after meals	Warm water
Yashad Bhasma(Fine powder)	(250mg) once a day after meals	Warm water
Sukshma Triphala(Tablet)	(125mg) 2 tabs. twice daily after meals	Warm water

**** Medications that helped in healing and nourishing asthi dhatu were chosen.***

Table 5: External *ayurvedic* therapies for the next 30 days (9/4/22 -8/5/22)

Abhyanga local(daytime)	Manjishtha (Rubia cordifolia) tail
Lepa local (night)	*Panchvalkal* ointment*(Panchvalkal*and*yashtimadhu*)

**** Therapies that helped in increasing local blood circulation were chosen.***

2.6 Pathya- Apathy

Along with the treatment, the patient was advised to follow the dietary regimen.

Pathya haar	Fresh fruits, green vegetables, buttermilk, ghee, milk, chapatis, homely prepared food items
Pathya vihara	local massage and sunlight exposure
Apathy aahar	Junk food, deep fried, spicy food, stale food, curd, brinjal, jackfruit
Apathy vihara	Daytime sleep, nail-biting

3. OBSERVATION AND RESULTS

After the first 15 days of treatment, there was a minor reduction in cracking and pitting of nails (figure 2). Worth noting results were found at the end of the treatment, which included a complete decrease in brittleness of nails and

hyperkeratosis of fingernails (figure 3) but persisted in toenails in minor form. Melanonychia was still present in fingernails. Present the outcomes as changes in the severity grading of disease.

Fig 1: Onychodystrophy of Multiple Nails of Fingers and Toes, Brittle Nails, Onycholysis, Distal Nail Plate Splitting, Subungual Hyperkeratosis, And Melanonychia

Fig 2: Minor reduction in cracking and pitting of nails after 15 days of treatment

Fig 3: Complete reduction in hyperkeratosis of fingernails (figure 3)

4. DISCUSSION

A wide range of diseases affects nails, like bacterial–fungal infection, psoriasis, paronychia, etc. Many of the population often disregard nail disease, but Nail Lichen Planus needs special attention as avoiding treatment can lead to permanent disfigurement like pterygium of nails. The *hetu*, according to *Ayurveda*, that could lead to this condition could be the occupation(masonry) that caused continuous "*abhighata*" and exposure to irritants. His hands and feet used to remain in contact with water for long hours. Moreover, his diet consisted of mainly rice and curry with lots of spices. Sushrut samhita mentions *Abhighata* as the primary cause, which leads to *rooksha*, *asit,* and *khara* nails. The continuous irritation and diet acted as the main *hetu* for the formation of *kunakha* due to vitiation of *vata* and *pitta*. It involves vitiation of *vata* and *pitta doshas* involving *asthi dhatu*, *asthivaha srotas.* The treatment was planned according to the involvement of *doshas* and *dhatu*. It comprised of administering internal and external ayurvedic preparations that were *vata- pittashamak, raktashodhak, ropaka, krimighna* and the maneuvers that increased local blood circulation. Following is the probable mode of action of the drug and therapies. *Kaishor Guggulu* has *Rakta-prasadak* property. It augments the nutrition by its vasodilator property due to which it corrects *Pitta dushti* and reduces inflammation by providing fresh blood.[1] *Guggulu* contains the natural properties of blood cleansing and flushing out the toxins from the body.[2] *Gandhaka Rasayan's Pitta shamak* properties act as an anti-inflammatory medicine[7]. It maintains the balances of *Vata, Pitta*, and *Kapha Doshas*. It possesses antibacterial and antiviral properties. It is used widely in the treatment of skin disorders, chronic fever, and urinary tract disorders. It provides healing effects in this condition by blood purification. It boosts the immunity of the body and thus helps to fight against infections[7]. *Sukshma Triphala Vati* is proprietary medicine having a combination of *Kajjali* and *Triphala*, which acts as anti-inflammatory and antibiotic in nature, corrects the infection, and inhibits further necrosis of local tissue due to its high penetration capacity at cellular level [1] *Mahamanjisthadikwath* consists of *manjisth (Rubia cordifolia), triphala (*combination of amalaki, harotaki, vibhitaki) *(Emblica officinalis, Terminalia chebula, Terminalia bellerica), vacha (Acorus calamus), haridra (Curcuma longa)* and *brihati(Solanum indicum)* which helps in pacifying vitiated pitta and vata. It has an excellent detoxifying and anti-inflammatory activity.[1] *Acharya Bhavprakash* has described *manjistha* as "*kushtha-asra-Vrana-meh noot*"[1] and *madhur, guru guna* properties help in pacifying vitiated *vata* and *pitta dosha*. Thus, its *taila* was also used for local application. *Panchtiktaghritaguggulu* has been described in *AshtangHridayam*. It consists of mainly *tikta dravyas* along with *ghrita* and *guugulu*. The *ushna veerya* of drugs helps in increasing *Dhatwagni* and provide nutrition to the *Dhatus*, especially *Asthi dhatu*. *Tikta Rasa* has predominance of *Akasha* and *Vayu Mahabhuta* which maintains normal health of *AsthiDhatu.* " *Nakha*" being *mala* of *asthi* also get strengthened due to proper *dhatvagni* function[1]. *Yashad bhasma* was chosen because it has *Kashaya rasa* and *vranaropak* property. It is a derivative of zinc in the form of herbo-metal. Biochemically, zinc helps in the development and activation of T-lymphocytes which is a significant component of the immune system. Additionally, it hastens the process of re-epithelialization which strengthens the wound.[1] For *dhavan*, decoction of *guduchi, neem* and *triphala* was chosen as *neem* has properties of "*krimi-pitta-vishapranoot*" according to *Bhavprakash* and *guduchi* with *kashay rasa, madhurvipaka* and *snigdhaguna* helps in alleviation of vitiated *vata* and *pitta* and *neem* being potent wound healer helps in early recovery. Also, *Acharya Sushruta* has recommended *Triphala* in wound purification. Also, Kumar et al.'s study showed that *Triphala* had antioxidant, antibacterial and wound healing properties that were required to treat infected wounds[14]. Additionally, basti was administered to the patient seeing the dominance of vata and involvement of mala of *asthi dhatu*. Karanj having *ushna veerya* and *katu vipaka* will help in strengthening *dhatvagni* and as a result there will be proper formation of *updhatu* and *malas*. As *vata vriddhi* leads to *asthi-kshaya.* therefore, *vata* pacification will lead to proper formation of *asthi dhatu* and consecutively its *mala*. Also, *karanj* oil possesses anti-bacterial properties against Esch. coli, Staph. aureus, Staph. Albus, etc[1]and mild antifungal activity against keratinophillic fungi viz., Verticillium tenuipes, Keratinophyton-tereum, Malbranchea pulchella.[1] Lastly, the ointment containing *Panchavalkala* acted as a *vatahara* due to *Guru Guna* and thus might have helped in reducing the *Ruja*(pain).[3] Due to *Kashaya Rasa* (astringent taste) and *sheet veerya* it acted as a *Stambhaka* (arresting) and *Grahi* (that holds) which helped in drying up the secretions from nails.[3] Also, *Kashaya ras* and *sheet virya are Pittahara* and therefore reduced *Raga* (redness). It has also been described as *Atitwak Prasadaka* (that cleanses the skin).[4]

5. CONCLUSION

Nail Lichen Planus is a disease which if left untreated could lead to permanent nail deformity. Steroid injections into nail matrix are effective but they also come with many side effects. This Ayurvedic treatment protocol which was prescribed for 45 days helped in complete reduction of cracking, pitting and brittleness of nails. The patient also found the growth of proper nail from the nail bed. Additionally, these treatments did not cause any side effects.

6. AUTHORS CONTRIBUTION STATEMENT

Dr Vaishali Kuchewar helped in diagnosing, planning the treatment protocol and provided inputs for the document. Dr Aman Chhabra helped in the collection of data and preparation of the manuscript. All the authors have read and verified the manuscript.

6. ETHICAL STATEMENT

Written informed consent was obtained from the patient which included his permission to take pictures and utilize them for publication in the journal.

7. CONFLICTS OF INTEREST

Conflict of interest declared none.

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